

REMARKS

Reconsideration of the above-identified application is respectfully requested in view of the foregoing amendments and the following remarks.

The Pending Claims

Claims 1, 2 and 6-28 are currently pending. The substance of claim 3 is now incorporated into claim 1, and the substance of claim 4 is combined with claim 1 and presented as new claim 17. Claims 3-5 are canceled. Each pending claim is directed to a method for preparing a lithographic printing master.

Claims 1, 2 and 6-16 use hydrophobic thermoplastic polymer particles, and include the steps of providing an imaging material which comprises a lithographic base having a hydrophilic surface comprising hydrophobic thermoplastic polymer particles which is removable in a single-fluid ink or can be rendered removable in a single-fluid ink by exposure to heat; image-wise exposing the image-recording layer to heat; and processing the material by supplying to the image-recording layer a single-fluid ink which is an emulsion of an ink phase and a non-aqueous polar phase.

Claims 17-28 include the use of aryldiazosulfonate polymer, and include the steps of providing an imaging material which comprises a lithographic base having a hydrophilic surface and a non-ablative image-recording layer comprising an aryldiazosulfonate polymer which is removable in a single-fluid ink or can be rendered removable in a single-fluid ink by exposure to light; image-wise exposing the image-recording layer to light; and processing the material by supplying to the image-recording layer a single-fluid ink which is an emulsion of an ink phase and a non-aqueous polar phase.

Summary of the Office Action

Claims 1, 2 and 4-10, stand rejected under 35 U.S.C. § 103(a) as unpatentable over the Vermeersch '128 patent (i.e., U.S. Patent 5,786,128) in view of Teng (i.e., U.S. Patent 6,548,222) and Klingman (i.e., U.S. Patent 6,140,392). Claims 1-3 and 5-10 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the Vermeersch '750 patent (i.e., U.S. Patent 6,030,750) in view of Klingman and Teng.

Discussion of the Obviousness Rejections

(a) Claims 1, 2 and 4-10

The obviousness rejection of claims 1, 2 and 4-10 over the Vermeersch '128 patent (U.S. Patent 5,786,128) (or the Vermeersch '750 patent, U.S. Patent 6,030,750), in view of Teng and Klingman should be withdrawn in view of the amendments to claim 1 set forth herein and the following comments.

Independent claim 1 as amended, and those claims dependent on claim 1, requires, *inter alia*, an imaging material comprising a non-ablative image-recording layer comprising hydrophobic thermoplastic polymer particles that is removable in a single-fluid ink or can be rendered removable in a single-fluid ink by exposure to heat.

At the outset, neither Vermeersch '128, Teng or Kingman teach the use of hydrophobic thermoplastic polymer particles in their respective imaging layers. For example, Vermeersch '128 utilizes aryldiazosulfonate. Thus, even assuming a combination of the three references is justifiable (which it is not—see below), the method described in claims 1, 2 and 6-16 (which require, *inter alia*, the use of hydrophobic thermoplastic polymer particles) would not result. Withdrawal of the obviousness rejection on this basis is respectfully solicited.

Moreover, any obviousness argument that might be raised against these claims on the basis of a combination of Vermeersch '128 or Vermeersch '750, with Teng and Kingman, would also fail, for the reasons set forth below.

Teng utilizes plate technology that is distinct from the technology used in the Vermeersch '128 patent, the Vermeersch '750 patent, and in the claimed method. The Teng technology is not only distinct; it is fundamentally incompatible with the Vermeersch '128 and Vermeersch '750 plate technologies. There is thus no basis in the references themselves to support the asserted combination of Teng and Vermeersch '128 or Vermeersch '750.

Teng uses a thermosensitive layer in the preparation of its negative thermographic printing plate. As part of that layer, Teng requires the use of a layer that is "capable of hardening through polymerization or crosslinking upon exposure to an infrared radiation". Hardening, according to Teng, "is achieved through polymerization or crosslinking of [two] resins." *See Teng, col. 3, l. 66 to col. 4, l. 8.*

In stark contrast, Vermeersch '750 (and '128) teach the use of technology that is distinct from Teng. Vermeersch '750 and '128, unlike Teng, use fully-formed polymers in their imaging layers to render the imaging layer insoluble. Specifically, the

Vermeersch '750 imaging layers include a hydrophilic binder and fully-formed polymers (e.g., hydrophobic thermoplastic polymer particles), wherein the hydrophobic binder is "preferably not cross-linked or only slightly cross-linked". *See, e.g., Vermeersch '750, col. 4, ll. 26-33.* Vermeersch '128 uses aryldiazosulfonate, which upon exposure to light, cleaves the sulfonate group, rendering the polymer insoluble. There is, thus, no teaching in Vermeersch '750 or '128 to polymerize or cross-link the hydrophobic thermoplastic polymers. This distinction (use of polymerizable components (Teng) v. use of thermoplastic polymers (Vermeersch '750) or light-sensitive polymers (Vermeersch '128)) segregates Teng and the Vermeersch '750 and '128 patents into two separate, and incompatible, plate technologies. There is, therefore, no basis in the references themselves to support the asserted combination of Teng and either Vermeersch '750 or Vermeersch '128. The obviousness rejection should be withdrawn on this basis alone.

Moreover, there is no basis in the references themselves that supports the asserted combination of the Kingman and Vermeersch patents. The Office Action uses Kingman to provide the teaching absent in VerMeersch '750 and '128 concerning the type of developing fluid; the Kingman fluid (as described in the Office Action at page 2) is comprised of continuous ink and a non-aqueous polar solvent. In contrast, Vermeersch '750 describes the use of water (or an aqueous liquid) as a developing fluid. *See, e.g., col. 7, 56-59.* Vermeersch '128 also prefers water. *See, e.g., col. 8, ll. 32-38.* The use of the Kingman fluid, which is not water *per se* and which would also not be categorized as an aqueous liquid, would directly conflict with the teaching in the Vermeersch '750 and '128 patents. Because there is no motivation in the references themselves to use the non-aqueous Kingman fluid in the Vermeersch '750 and '128 methods, an obviousness rejection entered against claims 7-9 or 12-16 on this basis is improper.

The allowance of claims 1, 2 and 6-16 is respectfully solicited.

b) Claims 1-3, 5-10 and 17-28

The obviousness rejection of claims 1-3 and 5-10 over the Vermeersch '750 patent (U.S. Patent 6,030,750) (or the Vermeersch '128 patent, U.S. Patent 5,786,128), in view of Teng and Klingman should be withdrawn in view of the amendments to claim 1, the introduction of new claims 17-28, and the following comments.

The rejection of claims 1, 2 and 6-10 were addressed in the prior section, and will not be repeated here. Of the remaining claims, the substance of claims 1 and 4 have been combined and reformulated as new claim 17, and claim 5 canceled in favor of new

claim 19. New claims 18 and 20-28 are in dependent form and depend, either directly or indirectly, on claim 17.

Independent claim 17, and those claims dependent therein, requires, *inter alia*, an imaging material comprising a non-ablative image-recording layer comprising an aryldiazosulfonates that is removable in a single-fluid ink or can be rendered removable in a single-fluid ink by exposure to light.

At the outset, neither Vermeersch '750, Teng or Kingman teach the use of aryldiazosulfonates in their respective imaging layers. For example, Vermeersch '750 utilizes hydrophobic thermoplastic polymers in its imaging layers. Thus, even assuming a combination of the three references is justifiable (which it is not—see below), the method described in claims 17-28 (which require, *inter alia*, the use of aryldiazosulfonates) would not result. Withdrawal of the obviousness rejection on this basis is respectfully solicited.

Moreover, any obviousness argument that might be raised against these claims on the basis of a combination of Vermeersch '128, with Teng and Kingman, would also fail, for the reasons set forth below.

Teng utilizes plate technology that is distinct from the technology used in the Vermeersch '128 patent, and in the claimed method. The Teng technology is not only distinct, it is fundamentally incompatible with the Vermeersch '128 plate technology. There is thus no basis in the references themselves to support the asserted combination of Teng and Vermeersch '128.

As mentioned previously, Teng uses a thermosensitive layer in the preparation of its negative thermographic printing plate. As part of that layer, Teng requires the use of a layer that is "capable of hardening through polymerization or crosslinking upon exposure to an infrared radiation". Hardening, according to Teng, "is achieved through polymerization or crosslinking of [two] resins." *See Teng, col. 3, l. 66 to col. 4, l. 8.*

In stark contrast, Vermeersch '128 teaches the use of technology that is distinct from Teng. Vermeersch '128, unlike Teng, uses fully-formed polymers in its imaging layers to render the imaging layer insoluble. Specifically, the Vermeersch '128 imaging layers include a hydrophilic binder and fully-formed polymers (e.g., aryldiazosulfonates), wherein the hydrophobic binder is "preferably not cross-linked or only slightly cross-linked". *See, e.g., Vermeersch '128, col. 2, ll. 58-67.* Vermeersch '128 uses aryldiazosulfonate, which upon exposure to light, cleaves the sulfonate group, rendering the polymer insoluble. There is, thus, no teaching in Vermeersch '128 to polymerize or cross-link the aryldiazosulfonate polymer. This distinction (use of polymerizable components (Teng) v. use of aryldiazosulfonate polymers (Vermeersch '128)) segregates Teng and the Vermeersch '128 patent into two separate, and incompatible, plate

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technologies. There is therefore no basis in the references themselves to support the asserted combination of Teng and the Vermeersch '128 patent. Any obviousness rejection entered on this basis should be withdrawn.

Moreover, there is no basis in the references themselves that supports the asserted combination of the Kingman and Vermeersch patents. The Office Action uses Kingman to provide the teaching absent in Vermeersch '128 concerning the type of developing fluid; the Kingman fluid (as described in the Office Action at page 2) is comprised of continuous ink and a non-aqueous polar solvent. In contrast, Vermeersch '128 prefers water as a developing fluid. *See, e.g., col. 8, ll. 32-38.* There is, thus, no motivation in the Vermeersch '128 patent to use the Kingman solution in the Vermeersch '128 method. Vermeersch '128 teaches the use of water. The use of the Kingman fluid, which is not water *per se* (and which would also not be categorized as an aqueous liquid), would directly conflict with the teaching in the Vermeersch '128 patent. Because there is no motivation in the references themselves to use the non-aqueous Kingman fluid in the Vermeersch '128 methods, an obviousness rejection entered against claims 7-9 or 12-16 on this basis is improper.

The allowance of claims 1-3, 5-10 and 17-28 is respectfully solicited.

Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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Date: September 2, 2003

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